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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/730,942	12/10/2003	Kiyoshi Terauchi	018842.1285	6287

24735 7590 11/03/2005

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EXAMINER

LESLIE, MICHAEL S

ART UNIT PAPER NUMBER

3745

DATE MAILED: 11/03/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/730,942

Applicant(s)

TERAUCHI ET AL.

Examiner

Michael Leslie

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 09 September 2005.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-5 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-5 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 10 December 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
- ☒ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date <u>9/05</u> | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Applicant's arguments filed September 9, 2005 have been fully considered but they are not persuasive. Applicant's remarks clarifying the subject matter shown in Figs. 6 and 7 is appreciated and the objection is hereby withdrawn.

Applicant has generally argued that the claims, as amended, require "a cylindrical portion" opposite the "spherical portion" of the "sliding members", which is not disclosed in either Fujii et al (6467296) or Fukai et al (6398519). This statement is not agreed with. While not specifically described in the specification, a close inspection of Figs. 2 and 4 of Fujii et al and Fig. 1 of Fukai et al shows that the sliding members include a cylindrical portion opposite the spherical portions. Further, had the cylindrical portions not been shown, this feature, as shown in U.S. Patents 6168389 and 6371007, would be obvious to one of ordinary skill at least for preventing contamination of the operating fluid due to breakage of the thin edges, where the flat portion meets the spherical portion, due to grinding and wear.

Applicant further argues that the limitation "the contact surfaces are connected to each other through the side wall portion ..." is not disclosed in Fukai et al. This statement is not agreed with. While not specifically described in the specification, this feature is shown in Fig. 1 of Fukai et al. Further, it is noted that this limitation is considered broad, the limitations of claim 3 more precisely define the invention, and do not appear to be taught by Fukai et al.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

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A person shall be entitled to a patent unless –

(a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.

Claims 1 and 3-5 are rejected under 35 U.S.C. 102(b) as being anticipated by Fujii et al.

Fujii et al. disclose a swash-plate compressor for compressing a fluid, the compressor comprising a cylinder block (13) having a cylinder bore, a piston (26) having a first end portion reciprocally movable in the cylinder bore and a second end portion opposite to the first end portion, the second end portion having a pair of engaging portions faced to each other with a space left therebetween and a side wall portion connecting the engaging portions to each other, a swash plate (22) having a part inserted between the engaging portions and driven to rotate, and a pair of sliding members (23, 24) interposed between the engaging portions and the swash plate, respectively, each of the sliding members having a cylindrical portion (not numbered) with a flat surface slidably contacted with the swash plate and a spherical portion opposite to the cylindrical portion, each of the engaging portions having a contact surface (26a) slidably contacted with the spherical portion, each of the contact surfaces extending to the side wall portion. Wherein the contact surfaces are connected to each other through the side wall portion, the contact surfaces are continuously formed between the engaging portions through the side wall portion, the contact surface is formed along a spherical surface having a curvature equal to that of the spherical portion, and wherein a carbon dioxide refrigerant is used as the fluid.

Claims 1 and 2 are rejected under 35 U.S.C. 102(a) as being anticipated by Fukai et al.

Fukai et al disclose a swash-plate compressor for compressing a fluid, the compressor comprising a cylinder block (1) having a cylinder bore, a piston (3) having a first end portion reciprocally movable in the cylinder bore and a second end portion opposite to the first end

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portion, the second end portion having a pair of engaging portions faced to each other with a space left therebetween and a side wall portion connecting the engaging portions to each other, a swash plate (5) having a part inserted between the engaging portions and driven to rotate, and a pair of sliding members (6) interposed between the engaging portions and the swash plate, respectively, each of the sliding members having a cylindrical portion (not numbered) with a flat surface slidably contacted with the swash plate and a spherical portion opposite to the cylindrical portion, each of the engaging portions having a contact surface slidably contacted with the spherical portion, each of the contact surfaces extending to the side wall portion. Wherein the contact surfaces are connected to each other through the side wall portion, and wherein the contact surface is formed along a spherical surface having a curvature equal to that of the spherical portion.

Conclusion

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event,

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however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.


Any inquiry concerning this communication or earlier communications from the examiner should be directed to Michael Leslie whose telephone number is (571) 272-4819. The examiner can normally be reached on M-F 8:00am - 4:30pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Edward Look can be reached on (571) 272-4820. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

ML
October 31, 2005


Michael Leslie
Patent Examiner
AU 3745


EDWARD K. LOOK
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 3700
10/31/05